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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 32

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Filing Date: March 16, 1999
Appellant(s): YOUNG ET AL.

Donald R. Studebaker
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed June 24, 2002.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is deficient because as set forth in the summary, appellant is asserting that "[t]he system and method of the present invention can be used to manufacture a custom milled insole based on a foot in it's natural, uncompressed state with high three-dimensional accuracy" and also is asserting that "the customer is not required to wear a compressive sock or other device to obtain the surface coordinates of the foot". It is noted that the specification as originally filed does not appear to support that the foot is measured in "it's natural, uncompressed state", and makes no reference to whether or not any such "compressive" sock is required or whether such a "compressive sock" could be used. Regarding the "uncompressed state" of the foot, it is noted that the foot is placed in channel 26 of scanning station 20 (see Figure 1 and page 10, lines 7-8). While the specification does teach that bar 22 helps "position and stabilize the customer during the scanning operation" (page 5, lines 13-17), the specification does not teach that the foot is in an "uncompressed state", i.e. that the person is

putting no weight on their foot, while the foot is located in channel 26 to be scanned. It is further noted that as only one foot is being scanned, the bar 22 can be used to help a person retain their balance even with full weight on the foot. Additionally, it is also noted that the specification teaches that the tempered safety glass 114 located at the bottom of the channel 26 on which the person's foot rests (Figures 1 and 15A and page 10, lines 3-6) can support a customer weighing up to 500 lbs., which indicates that the scanning station can support a great deal of weight. If a person were not putting any weight on this piece of glass 114 at the bottom of the channel 26, there would not appear to be any need to make the piece of glass capable of supporting 500 lb., which seems to indicate that the foot is not necessarily in the "uncompressed state" while being scanned as asserted by appellant.

(6) Issues

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows: the rejection of claims 1, 7-16, and 20-29 under 35 U.S.C. §103 as being obvious over U.S. Patent No. 5,237,520 (White) in view of U.S. Patent No. 5,449,256 (Sundman) is respectfully withdrawn by the Examiner. Additionally, the rejection of claims 1, 3, 4, and 6 under 35 U.S.C. §103 as being obvious over U.S. Patent No. 5,237,520 (White) in view of U.S. Patent No. 5,449,256 (Sundman) and further in view of the prior art description set forth in the specification at page 8, lines 11-15 is respectfully withdrawn by the Examiner.

(7) Grouping of Claims

The rejection of claims 1, 3, 4, and 6-29 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and

reasons in support thereof. See 37 CFR 1.192(c)(7). Specifically, appellant's brief does not include reasons in support thereof.

(8) Claims Appealed

A substantially correct copy of appealed claims 1, 3, 4, and 6-29 appears on pages 12-15 of the Appendix to the appellant's brief. The minor errors are as follows: in claim 15, line 1, —laser—should be inserted prior to "scanning".

(9) Prior Art of Record

5,088,864	YANAGIDA	2-1992
5,449,256	SUNDMAN	9-1995
5,712,803	GARUET-LEMPIROU	1-1998

Applicant's Admission of Prior Art on page 8, lines 11-15 of the specification.

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,088,864 (Yanagida). Yanagida teaches a system for making customized objects utilizing a "station" that has chair 10 to support a person being measured (Figure 2 and column 3, lines 34-37). The system utilizes a contour measuring means 1 which can utilize a "laser light beam cutting method" to measure an object to be measured, e.g., a person's face, by displacing the laser light beam relative to the person's face (column 5, lines 48-65). A series of three-dimensional cutting machines 3 are in communication with the scanning station (Figures 1 and 2) such that the scanned data is sent to a computer for processing, and then the data is subsequently used to control the cutting machine to cut the scanned shape (column 6, lines 23-36 and Figure

1). Note that the limitations regarding the "shoe insole" and "foot" in claim 13 are functional recitations, and that Yanagida's device is capable of carrying out these functions, i.e., there's no reason why Yanagida's device could not be used to scan a foot or to produce a custom insole (particularly note column 5, lines 36-40). Also note that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Claims 1, 4, 6, and 7-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,449,256 (Sundman) in view of U.S. Patent No. 5,712,803 (Garuet-Lempirou). Sundman teaches a system for use in an office environment for milling custom shoe insoles, where this system includes a foot contour measurement machine (column 1, lines 42-43) and a mill 10 for machining the insoles. The mill has a disk drive 15 for receiving the foot contour measurement data, which then controls the x, y, and z, movements of the milling head 21 to produce a desired insole contour (column 5, lines 27-34). To mill the insole, an insole blank 11 is mounted to a support tray 12. The relative motion in x, y, or z directions between the milling cutter and the insole blank may be achieved by moving the insole blank/tray, and/or by moving the milling head (column 3, lines 25-37). Motion of the milling head 21 and/or the motion of the tray 12 is controlled by stepper motors 51, 55, and 510 that act in response to the data inputted from the contour measurement machine. Sundman's milling station also includes a particle

control system with positive-pressure air flow (column 7, lines 39-41) generated by fans, so that particles may be collected in tray 14 and disposed of. The air and the particles flow through channels 67-69, which, being enclosed and having higher pressure than that of the outside air, constitute plenums. The entrance 62 to these plenums is disposed in the vicinity of the milling assembly (column 7, lines 61-62). The velocity of the air flow through each channel is inversely proportional to the volume of air flowing through each channel (column 8, lines 35-41). The air flow velocity is sufficient to eliminate particulate flux from the milling cavity (column 7, lines 45-48). According to the current application on page 7, line 24, the velocity of the air flow must be low enough to grab the debris particles, which Sundman's velocity is. Sundman does not teach a laser scanner to scan the foot, but instead teaches a device having an array of parallel pins, each pin displaceable longitudinally such that when a foot is pressed against the pins, the longitudinal displacement of the pins represents the contour of the foot. Sundman also does not teach that the computer (with disk drive 15) is located in a lower portion of the milling machine stand, but instead teaches that it is located approximately in the middle portion of the stand (see Figure 1A).

Garuet-Lempirou teaches a device for scanning the sides and undersurface of a foot 4 (Figure 1) that is set on transparent glass base 40 (Figure 1 and column 5, lines 57-58, and column 1, lines 62-63). Garuet-Lempirou's device utilizes laser-generating sensors (column 2, lines 30-32 and column 3, lines 16-17 and 31-37) Ca1 through Ca4 (column 4, line 52 and Figure 1). The sensors are attached to a cradle 2 that moves in translation along longitudinal foot axis 4 (column 5, lines 65-67 and Figure 1). The cradle 2 has vertically-extending sides connected by a horizontally-extending portion, and is shaped so that the vertically-extending sides are outside of

the width of base 40 and that the horizontally-extending portion is below base 40 (Figure 1 and column 6, line 41). Thus, regarding claim 14, the sensors disposed on the cradle beneath the base 40 are movable beneath the base 40 (see Figure 1 and column 6, lines 39-44). Regarding claim 16, the plane or "fan" of laser light extends through the transparent base 40 as just described. Also regarding claims 16 and 18, Garuet-Lempirou's "transparent material" or "glass" for base 40 inherently includes tempered safety glass (column 5, lines 57-58, and column 1, lines 62-63). Regarding claim 19, note that the sensors or "laser scanning units" Ca1 through Ca4 are disposed so as to be movable along the sides and base (Figure 1). Regarding claim 21, the entire scanning device of Garuet-Lempirou (shown in Figure 1) acts as an input device for inputting information about the customer, i.e., the three-dimensional map of the customer's foot, to a signal processing system 3 having display Visu (Figure 2 and column 5, lines 7-10, 16-18, and 25-37). Garuet-Lempirou further teaches that the data acquired via the foot-scanning device may be supplied to and used to control automatic processing devices (column 6, lines 30-35).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have replaced the longitudinal-pin-type foot contour measurement machine taught by Sundman with the laser scanning foot contour measurement device taught by Garuet-Lempirou for the purpose of being able to acquire three-dimensional foot data that takes into account the entire measured surface area rather than just the selected points where the longitudinal pins of Sundman's device contact the foot, thus increasing the accuracy of the measured foot data, thus allowing a better fitting shoe insole to be manufactured. Regarding the placement of the control device in the milling stand, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have placed this control device

wherever was desired or expedient, particularly since moving the device from the middle portion of the stand to the lower portion of the stand would not affect the operation of Sundman's device, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Claim 3, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,449,256 (Sundman) in view of U.S. Patent No. 5,712,803 (Garuet-Lempirou) as applied to claim 1 above, and further in view of Applicant's admission of prior art (AAPA) on page 8, lines 11-15. Sundman and Garuet-Lempirou disclose all of the elements as claimed as described above, except that Garuet-Lempirou is silent as to whether or not the laser is non-focused. In the specification on page 8, lines 11-15, Applicant admits that the specifics of the laser technology used in the laser scanners is known in the art. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have scanned the necessary portions of the foot with a non-focused "fan-shaped" line of laser light as this is known laser technology according to AAPA, and thus little trouble-shooting would be involved in using a known technology.

(11) Response to Argument

Claim Rejections - 35 USC § 102

Claim 13 as anticipated by Yanagida

Appellant has asserted that the scanning by Yanagida's system is performed by "among other things, two cameras 12A and 12B", and is used to scan a person's face rather than a foot. Appellant states:

> Yanagida does not disclose of suggest 'at least one scanning station for supporting a foot to be measured, the at least one scanning station including at least one movable laser

scanning unit for determining coordinates of an undersurface of the foot by directing at least one line of laser light along the undersurface' as recited in claim 13.

Firstly, regarding the laser scanning unit, as set forth in the above rejection, Yanagida's system utilizes a contour measuring means 1 which can utilize a "laser light beam cutting method" to measure an object to be measured, e.g., a person's face, by displacing the laser light beam relative to the person's face (column 5, lines 48-65). Yanagida specifically states that "[a]ccording to this method, a person's face is scanned by a light beam or laser light beam in the form of a light film" (col. 5, lines 53-55), and thus Yanagida teaches laser scanning. Further note that the three-dimensional configuration of the person's face that is measured by the scanning station (col. 5, lines 48-65, for example) is used by a computer to determine dimensional data or "coordinates" of the measured contour, which dimensional data is then used by the cutting machine(s) 3 to produce a workpiece based thereon (col. 6, lines 24-36).

Secondly, regarding the scanning of the foot, it is noted that all references to a "foot" or to an "insole" in claim 13 are intended use limitations, e.g., "for forming a custom-made insole", "for supporting a foot to be measured", "for determining coordinates of an undersurface of the foot", "insole-milling station" (i.e., station for milling insoles), and "for forming the custom-made insole". As set forth in the above rejection, there's no reason why Yanagida's device could not be used to scan a foot or to produce a custom insole (particularly note column 5, lines 36-40 which indicates that other things can be produced besides just a face, e.g., a whole body from the front). For example, if a person sits in the chair 10 (see Figure 3, for example), if they wanted their foot scanned, they could raise it to the appropriate level to be scanned. Note that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed

invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Additionally, the tool is blind to the specific workpiece on which it operates, i.e., the cutting machine doesn't care if it's cutting a medal or a shoe insole, etc. Additionally note that "[i]nclusion of material or article worked on by a structure being claimed does not impart patentability to the claims." *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)).

Additionally, appellant has asserted that "[o]ne having ordinary skill in the art would not be motivated to use Yanagida's system in the manner suggested by the Examiner". It is noted that the rejection is a rejection of an apparatus claim (not a method claim) under 35 U.S.C. § 102, not 35 U.S.C. § 103, and thus it is not necessary to provide such "motivation". It is merely necessary to show that the reference teaches each of the limitations, and for the functional or intended use limitations, to show that the prior art structure is capable of performing that function or intended use, as described above. In this case, as set forth in detail above, Yanagida's device is capable of performing each of the functional or intended use limitations in claim 13.

Claim Rejections - 35 USC § 103

Claims 1, 4, and 6-29 as rendered obvious by Sundman in view of Garuet-Lempirou

Appellant has asserted the following:

> With the method and system of the present invention, the foot is imaged in a natural relaxed state, such that the arch of the foot and other portions of the foot, are specifically

> not under compression. By imaging the foot in a natural state, non-weight bearing, non-compressed, we get a "true" image of the normal state of the foot. In this manner, the insole will contain an arch support that conforms to the foot, provides the most natural support, and not visa versa.

Firstly, it is noted that no language relating to the compressed state of the foot, or the lack of compression of the foot, is found in the claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Secondly, it is noted that the specification as originally filed does not appear to support that the foot is measured in "a natural relaxed state", "not under compression", or "non-weight bearing" state. Regarding the "uncompressed state" of the foot, it is noted that the foot is placed in channel 26 of scanning station 20 (see Figure 1 and page 10, lines 7-8). While the specification does teach that bar 22 helps "position and stabilize the customer during the scanning operation" (page 5, lines 13-17), the specification does not teach that the foot is in an "uncompressed state", i.e. that the person is putting no weight on their foot, while the foot is located in channel 26 to be scanned. It is further noted that as only one foot is being scanned, the bar 22 can be used to help a person retain their balance even with full weight on the foot. Additionally, it is also noted that the specification teaches that the tempered safety glass 114 located at the bottom of the channel 26 on which the person's foot rests (Figures 1 and 15A and page 10, lines 3-6) can support a customer weighing up to 500 lbs., which indicates that the scanning station can support a great deal of weight. If a person were not putting any weight on this piece of glass 114 at the bottom of the channel 26, there would not appear to be any need to make the piece of glass capable of supporting 500 lb., which seems to indicate that the foot is not necessarily in the "uncompressed state" while being scanned as asserted by appellant.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). It is specifically noted that appellant has asserted that Sundman "does not disclose or suggest 'scanning the undersurface of the foot with at least one laser scanning unit by directing at least one line of laser light along the undersurface' of the foot as recited in claims 1 and 13". Note that the Sundman reference was not relied upon to teach this feature.

On page 7 of the Appeal Brief, in the paragraphs beginning "Garuet-Lempirou discloses a system..." and "[T]hus, Garuet-Lempirou teaches digitizing...", Appellant has made a number of assertions about the Garuet-Lempirou patent that appear to indicate that Appellant believes that the fact that the foot measured by Garuet-Lempirou's device is under a "compression load" serves to prevent it from being used in a rejection of the claims. However, Appellant's reasoning is unclear as it is noted that there is no language relating to the compressed state of the foot, or the lack of compression of the foot, found in the claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Secondly, it is noted that the specification as originally filed does not appear to support that the foot is measured in "a natural relaxed state", "not under compression", or "non-weight bearing" state, rendering it further unclear why or how measurement of a foot under a compression load by Garuet-Lempirou's measuring device would serve to differentiate foot scanning of the present invention from the foot scanning taught by Garuet-Lempirou. Regarding the "uncompressed state" of the foot, it is

noted that the foot is placed in channel 26 of scanning station 20 (see Figure 1 and page 10, lines 7-8). While the specification does teach that bar 22 helps "position and stabilize the customer during the scanning operation" (page 5, lines 13-17), the specification does not teach that the foot is in an "uncompressed state", i.e. that the person is putting no weight on their foot, while the foot is located in channel 26 to be scanned. It is further noted that as only one foot is being scanned, the bar 22 can be used to help a person retain their balance even with full weight on the foot. Additionally, it is also noted that the specification teaches that the tempered safety glass 114 located at the bottom of the channel 26 on which the person's foot rests (Figures 1 and 15A and page 10, lines 3-6) can support a customer weighing up to 500 lbs., which indicates that the scanning station can support a great deal of weight. If a person were not putting any weight on this piece of glass 114 at the bottom of the channel 26, there would not appear to be any need to make the piece of glass capable of supporting 500 lb., which seems to indicate that the foot is not necessarily in the "uncompressed state" while being scanned as asserted by appellant.

Appellant has additionally asserted (page 7 of the Appeal Brief) that in contrast to Garuet-Lempirou, in the present invention, "the transparent wall is *not* digitized and calibration occurs with the transparent plate in place". This does not appear to be relevant to the present claims as no language in the claims regarding any "digitization of a transparent wall", "calibration", or "removal" or the lack of removal of the transparent plate exists. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Appellant has asserted, regarding claim 17, that Sundman does not disclose or suggest "at least one scanning station including a base having a length for supporting the foot" and "a first

and second side portion extending upwardly from the base along the length thereof. Note that the Sundman reference was not relied upon to teach this feature. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Appellant has asserted (bottom of page 7 of the Appeal Brief through the middle of page 8 of the Brief) the following:

> Garuet-Lempirou also does not disclose or suggest "at least one scanning station including a base having a length for supporting the foot...the at least one laser scanning unit including a first an second side portion extending upwardly from the base along the length thereof." as recited in amended claim 17. The Examiner appears to consider Garuet-Lempirou's cradle 2, to be the mechanical equivalent of Applicants' base. However, the user's foot is not supported on cradle 2, but rather base 40. Base 40 does not have a "first and second side portion extending upwardly from the base along a length thereof", as recited in claim 17.

Applicant appears to be misinterpreting the Examiner's rejection. As stated in the above rejection based on Garuet-Lempirou:

> Garuet-Lempirou teaches a device for scanning the sides and undersurface of a foot 4 (Figure 1) that is set on transparent glass base 40 (Figure 1 and column 5, lines 57-58, and column 1, lines 62-63). Garuet-Lempirou's device utilizes laser-generating sensors (column 2, lines 30-32 and column 3, lines 16-17 and 31-37) Ca1 through Ca4 (column 4, line 52 and Figure 1). The sensors are attached to a cradle 2 that moves in translation along longitudinal foot axis 4 (column 5, lines 65-67 and Figure 1). The cradle 2 has vertically-extending sides connected by a horizontally-extending portion, and is shaped so that the vertically-extending sides are outside of the width of base 40 and that the horizontally-extending portion is below base 40 (Figure 1 and column 6, line 41).

In other words, 40 is the "base having a length for supporting a foot" (Figure 1, col. 5, lines 57-58, col. 1, lines 62-63). In this instance, cradle 2, in combination with the sensors Ca1 through Ca4, constitutes the movable laser scanning unit since the cradle with sensors moves in

translation along foot axis 4 (col. 5, lines 65-67 and Figure 1). The claim sets forth "the at least one laser scanning unit including a first and second side portion extending upwardly from the base along the length thereof". It is noted that the laser scanning unit or cradle 2 has two vertically-extending sides (Figure 1 and col. 5, lines 3-5, for example), which sides extend upwardly above the top plane of the base 40 (see Figure 1), and which have a dimension along the length of the base (see Figure 1), and thus, which sides extend "upwardly from the base along the length thereof" as set forth in claim 17.

Appellant has additionally asserted the following:

> The Examiner also appears to be silent with regard to what she considers to be the mechanical equivalent of Applicant's claimed carrier. Claim 15 as originally presented recites that "the at least one laser scanning unit is mounted to a carrier which is movable along a length of the base." If the Examiner considers Garuet-Lempirou's cradle to be the mechanical equivalent of the claimed "base", then what is the structure in Garuet-Lempirou that corresponds to the claimed "carrier" of claim 15?

Firstly, it is noted that, as described above, Examiner does not consider the cradle 2 taught by Garuet-Lempirou to be the mechanical equivalent of the claimed base, but instead considers base 40 taught by Garuet-Lempirou to constitute the claimed "base". Secondly, in the particular instance of claim 15, note that as set forth in the above rejection, Garuet-Lempirou's device utilizes laser-generating sensors (column 2, lines 30-32 and column 3, lines 16-17 and 31-37) Ca1 through Ca4 (column 4, line 52 and Figure 1). The sensors are attached to a cradle 2 that moves in translation along longitudinal foot axis 4 (column 5, lines 65-67 and Figure 1). Note that as set forth in the claim, the laser-generating sensors themselves constitute "at least one movable laser scanning unit", noting that Ca4 is beneath base 40 (relating to claim 14), and finally, relating to claim 15, note that the sensors Ca1-Ca4 are mounted to movable cradle or "carrier" 2, which cradle or "carrier" is movable along a length of the base (col. 5, lines 65-67).

Claims 1, 4, and 6-29 as rendered obvious by Sundman in view of Garuet-Lempirou and further in view of Applicant's Admission of prior art (AAPA) on page 8, lines 11-15

It is noted that the heading in the Appeal Brief asserts that "No Reason or Motivation Exists in the Prior Art for Combining the Teachings of the Admitted Prior Art With Gunther in the Manner Asserted by the Examiner". It is assumed that Appellant properly meant --Garuet-Lempirou-- rather than "Gunther". It is also noted that this section presents the Examiner's response to Appellant's arguments set forth under the heading "2" beginning on page 8 of the brief, but that it does not appear that any of these arguments deal with the stated heading about a motivation to combine the prior art teachings with the teachings of the admitted prior art, but rather seem to deal with the motivation to combine the prior art teachings alone.

Applicant is asserting in this section that "[n]o motivation exists in Sundman for substituting the laser-based measuring system of Garuet-Lempirou for Sundman's pin array. Sundman contains absolutely no teaching or suggestion in support of the Examiner's position". It is noted that the motivation does not have to be found in the Sundman reference, but can be found in any of the references relied upon or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, firstly, one of ordinary skill in the art, upon reading the description of the foot contour measurement machine taught by Sundman, would understand that a measurement device operating such that "an array of pins that can each be displaced longitudinally, such that, when a person's foot is pressed into contact with a top side of this array of pins, the longitudinal displacements measure the contour of that person's foot" (Sundman, col. 1, lines 42-50) would only serve to measure the foot at the points

that the pins contact, and thus only serves to measure the foot at a finite quantity of discrete points. Secondly, Garuet-Lempirou specifically teaches that the laser scanning device of the '803 patent enables scanning with "great accuracy" (col. 1, lines 33-35), teaches that this laser scanning device is fast, which it specifically teaches is a good thing when measuring a foot so a person doesn't have to hold still for long periods of time (col. 2, line 63 through col. 3, lines 7), and furthermore, Garuet-Lempirou also specifically teaches that the scanning device measures a number of section planes that enable the external volume of the foot to be plotted in "wire mesh" and then "smoothed" (col. 6, lines 21-29) and thus enables the "exact shape" of the foot to be deduced from the plotted measured volume (col. 6, lines 45-49), which "exact shape" from a smoothed "wire mesh" takes more of the foot into account than the discrete points measured by Sundman's measuring device. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have replaced the longitudinal-pin-type foot contour measurement machine taught by Sundman with the laser scanning foot contour measurement device taught by Garuet-Lempirou for the purpose of being able to acquire three-dimensional foot data that takes into account the entire measured surface area (as taught by Garuet-Lempirou) rather than just the selected points where the longitudinal pins of Sundman's device contact the foot, thus increasing the accuracy of the measured foot data, thus allowing a better fitting shoe insole to be manufactured. Therefore, the motivation to combine Sundman with Garuet-Lempirou is proper as it comes from the knowledge that one of ordinary skill in the art would have of the operation of Sundman's device after reading the description of how it operates (col. 1, lines 41-49) to know that Sundman's device takes measurements at a number of

discrete points, in combination with the teachings of Garuet-Lempirou (col. 6, lines 21-29 and 45-49) described above.

Additionally, Appellant has asserted that to substitute Garuet-Lempirou's foot measuring device for Sundman's foot measuring device "would render Sundman's device unworkable, as the data recovered from any laser measuring device would not be compatible with the pressure measuring data of Sundman's device, and one having ordinary skill in the art could not 'invent' Applicant's claimed invention if presented solely with the teachings of Sundman and Garuet-Lempirou". This is not persuasive. Firstly, it is noted that the dimensional data from Sundman's measuring device is used to control the milling machine of Sundman's device (col. 5, lines 27-31, for example). Note that the dimensional data from Garuet-Lempirou can be used to control automatic manufacturing devices (col. 6, lines 30-32, for example). Since the milling machine taught by Sundman is an automatic manufacturing device that is likewise controlled with dimensional data, there would appear to be no reason why Sundman's milling machine would be rendered "unworkable" by controlling its movements with dimensional data from Garuet-Lempirou's measuring device. If Appellant is asserting that the data acquired by Sundman's measuring device is in a different format than the data acquired by Garuet-Lempirou's data, and thus could not be used with Sundman's machine, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Appellant further asserts that Examiner employed hindsight to replace the measuring device taught by Sundman with the measuring device taught by Garuet-Lempirou because "Sundman does not provide the required incentive or motivation to substitute laser measured data for pressure measured data" (page 9 of the Appeal Brief). It is again noted that the motivation does not have to be found in the Sundman reference, but can be found in any of the references relied upon or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). It is also noted that the Sundman's "pressure measured data" is actually a dimensional measurement based on a number of pin displacements, and that Garuet-Lempirou's "laser measured data" is also a dimensional measurement, which dimensional measurement is based on the dimensions measured by scanning lasers. As described in detail above, both Sundman's and Garuet-Lempirou's dimensional data are used to control processing or manufacturing machines. Additionally, the measuring device taught by Sundman would only serve to measure the foot at the points that the pins contact, and thus only serves to measure the foot at a finite quantity of discrete points. Furthermore, Garuet-Lempirou also specifically teaches that the scanning device measures a number of section planes that enable the external volume of the foot to be plotted in "wire mesh" and then "smoothed" (col. 6, lines 21-29) and thus enables the "exact shape" of the foot to be deduced from the plotted measured volume (col. 6, lines 45-49), which "exact shape" from a smoothed "wire mesh" takes more of the foot into account than the discrete points measured by Sundman's measuring device. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have replaced the longitudinal-pin-type foot contour measurement machine taught by Sundman

with the laser scanning foot contour measurement device taught by Garuet-Lempirou for the purpose of being able to acquire three-dimensional foot data that takes into account the entire measured surface area (as taught by Garuet-Lempirou) rather than just the selected points where the longitudinal pins of Sundman's device contact the foot, thus increasing the accuracy of the measured foot data, thus allowing a better fitting shoe insole to be manufactured. Therefore, the motivation to combine Sundman with Garuet-Lempirou is proper as it comes from the knowledge that one of ordinary skill in the art would have of the operation of Sundman's device after reading the description of how it operates (Sundman, col. 1, lines 41-49) to know that Sundman's device takes measurements at a number of discrete points, in combination with the teachings of Garuet-Lempirou (col. 6, lines 21-29 and 45-49) described above.

Claims 1, 4, and 6-29 as rendered obvious by Sundman in view of Garuet-Lempirou and further in view of Applicant's Admission of prior art (AAPA) on page 8, lines 11-15

This section is in response to the arguments presented in Appellant's section "C" beginning on page 9 of the Appeal Brief.

Appellant has asserted the following:

> Claim 3 recites that the 'step of scanning the undersurface of the foot comprises directing a non-focused fan-shaped line of laser light along the undersurface and sides of the foot'. Neither Sundman nor Garuet-Lempirou disclose or suggest directing 'a non-focused fan-shaped line of laser light along the undersurface' of the foot. To cure the deficiencies of the primary references the Examiner relies upon the description of the prior art set forth in the specification at page 8, lines 11-15.

Firstly, it is noted that as taught by Garuet-Lempirou, the laser light used to scan the foot is in the form of a "laser plane" (col. 1, lines 20-30 and col. 4, line 58 through col. 5, line 27, for example). The Garuet-Lempirou reference is silent as to whether there is any focusing element such as a lens utilized, and thus is silent about whether or not the "laser plane" is non-focused.

(It is noted that the plane is considered to be "fan-shaped".) However, as the use of non-focused fan-shaped laser scanning is known and thus the benefits of such are known, as set forth in the present specification on page 8, lines 11-15, there would thus be a known (as admitted by applicant on page 8) benefit to utilizing Garuet-Lempirou's fan-shaped laser plane in a non-focused manner.

Applicant asserts the following:

> Importantly, no motivation exists, absent Applicant's own teachings, to modify Garuet-Lempirou to direct 'a non-focused fan-shaped line of laser light along the undersurface' of the foot. Nor does the Examiner point to any specific teachings in Garuet-Lempirou or the admitted prior art to which would provide any support for the suggested modification.

Firstly, by saying that no motivation to modify exists beyond Applicant's own teachings, it appears that Appellant is asserting that to use Applicant's admitted prior art teachings is some form of hindsight. However, this is not persuasive. Note that when applicant states that something is prior art, it is taken as being available as prior art against the claims. Admitted prior art can be used in obviousness rejections. *In re Nomiya*, 509 F.2d 566, 184 USPQ 607, 610 (CCPA 1975). Again, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, since it has been established that Applicant's admitted prior art is available as prior art against the claims and can be used in an obviousness rejection, it is proper to use a motivation from that admitted prior art to combine references. In the instant case, one of ordinary skill in the art would be aware that if a technology is admitted to

be used in the prior art that there must be some benefit to using that technology, and thus the motivation to combine comes from a combination of this knowledge of one of ordinary skill in the art with Applicant's admitted prior art on page 8 of the specification. Secondly, regarding the assertion that the Examiner did not "point to any specific teachings in Garuet-Lempirou or the admitted prior art to which would provide any support for the modification", this statement is unclear. No, Garuet-Lempirou does not provide "support" in that Garuet-Lempirou is silent as to whether the plane of laser light used to scan the foot is "non-focused". If Garuet-Lempirou had specified that the plane of laser light was non-focused, there would have been no need to rely on Applicant's admitted prior art to determine whether or not there was a benefit to providing the plane of laser light in a non-focused manner. If Appellant is asserting that there is no motivation to make the plane of laser light taught by Garuet-Lempirou be non-focused as taught by Applicant's admitted prior art, as described above, Garuet-Lempirou was silent about this feature, and Applicant's admitted prior art let one of ordinary skill in the art know that there was benefit to using a non-focused laser, and thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have made Garuet-Lempirou's previously unspecified-focus plane of laser light be non-focused as described by Applicant's admitted prior art, as the fact that such non-focused laser light is known (as admitted by Applicant) indicates that there is benefit to using such a non-focused laser, which benefit would also be well-known if the technology is known. An example of such a known benefit was provided in the above rejection, namely that little trouble-shooting would be involved in using a known technology. Therefore, proper motivation to combine the references in the manner set forth in the above rejection based thereon exists.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Erica E. Cadugan
Patent Examiner

Andrea L. Wellington
Supervisory Patent Examiner
Conferee

William R. Briggs
Primary Examiner
Conferee

eec
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SIXBEY, FRIEDMAN, LEEDOM & FERGUSON
8180 GREENSBORO DRIVE SUITE 800
MCLEAN VA 22102